LIST OF AND AMENDMENTS TO CLIAMS

Claims 1 - 25 (canceled)

26. (currently amended) A method for forming a semiconductor die, comprising:

forming a trench in a surface of said die;

filing the trench with a sacrificial material;

patterning said die to form a series of channels extending substantially perpendicularly to said trench;

depositing a conductive material in said channels;

removing at least a portion of the sacrificial material; and

removing portions of said die under said trench so as to separate a portion of said die on one side of said trench from a portion on another side of said trench;

wherein said conductive material forms a plurality of conductive pins extending from said semiconductor die in a direction parallel to a plane of said semiconductor die.

27. (original) The method of claim 26, further comprising:

patterning said sacrificial material so that said channels extend so as to be partially in a portion of said die and partially a portion of said sacrificial material.

28. (original) The method of claim 26, wherein said sacrificial material is patterned to a depth greater than said die.

29. (original) The method of claim 26, wherein said removing is performed by grinding or etching of said die.

30. (original) The method of claim 26, wherein said die is part of a wafer having a plurality of dies, and said trench is a dicing lane of said wafer.

31. (original) The method of claim 26, wherein said sacrificial material is a polymer.

32. (original) The method of claim 26, wherein said sacrificial material is a photoresist.

33. (original) The method of claim 26, wherein said conductive material is one of a metal, a conductive paste, and a solder.

34. (original) The method of claim 26, further comprising depositing an adhesion layer in said channels prior to depositing said conductive material.

35. (original) The method of claim 34, wherein said adhesion layer is formed of a polymer and a silicon oxide.

36. (currently amended) A method for forming a semiconductor die, comprising:

forming a trench in a surface of said die;

filing the trench with a sacrificial material;

patterning said die to form a series of channels extending substantially perpendicularly to said trench;

depositing a conductive material in said channels;

removing portions of said die under said trench; and

removing at least a portion of the sacrificial material so as to separate a portion of said die on one

side of said trench from a portion on another side of said trench;

wherein said conductive material forms a plurality of conductive pins extending from said semiconductor die in a direction parallel to a plane of said semiconductor die.

37. (currently amended) The [[A]] method of claim 26, ~~forming substrates with at least one micro-cup~~, further comprising:

forming a plurality of vias ~~at least one via~~ in a [[the]] substrate;

coating said plurality of vias ~~at least one via~~ with a conductive material or a conductive and adhesive material to form a plurality of micro-cups ~~said micro-cup~~; and

coating adhesive material on the substrate to facilitate attachment of [[a]] said die ~~device having at least one pin~~, said plurality of pins ~~at least one pin~~ being sized, shaped and positioned to be received in a respective one of said at least one via.

38. (original) The method of claim 37, further comprising assembling said device to said substrate.

39. (canceled)

40. (currently amended) The method of claim 26 [[39]], wherein said semiconductor die has a plurality of sides, and wherein said pins extend from at least one of said sides.

41. (currently amended) The method of claim 26 [[39]], wherein said pins are micro-pins having a of length of 1 to

1000 microns, a width of 1 to 500 microns and a depth of 1 to 800 microns in the direction into the die.

42. (currently amended) The method of claim 26 [[39]], wherein said semiconductor die has a plurality of sides, and wherein said pins extend along said sides in a direction perpendicular to a plane of said semiconductor die.

43. (currently amended) The method of claim 26 [[39]], further comprising:

assembling said die to a substrate in which a series of openings has been formed, said openings being sized and spaced so as to receive said pins, so that said pins are received in said openings; and

securing said die to said substrate.

44. (previously presented) The method of claim 43, wherein said securing of said die is performed by providing an adhesive between contacting surfaces of said die and said substrate.

45. (currently amended) The method of claim 26 [[39]], further comprising:

providing an additional die with said pins: and

assembling said pins of said respective dies to one another so that at least some pins of said dies are in electrical contact with a pin of the other of said dies.

46. (new) A method for forming a semiconductor die, comprising:

forming a trench in a surface of said die;

filing the trench with a sacrificial material;

patterning said die to form a series of channels extending substantially perpendicularly to said trench;

depositing a conductive material in said channels;

removing at least a portion of the sacrificial material; and

removing portions of said die under said trench so as to separate a portion of said die on one side of said trench from a portion on another side of said trench;

wherein said sacrificial material is patterned to a depth greater than said die.

47. (new) A method for forming a semiconductor die, comprising:

forming a trench in a surface of said die;

filing the trench with a sacrificial material;

patterning said die to form a series of channels extending substantially perpendicularly to said trench;

depositing a conductive material in said channels;

removing at least a portion of the sacrificial material;

removing portions of said die under said trench so as to separate a portion of said die on one side of said trench from a portion on another side of said trench; and

depositing an adhesion layer in said channels prior to depositing said conductive material, wherein said adhesion layer is formed of a polymer and a silicon oxide.